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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/793,653	02/27/1997	FREDERIC DE SAUVAGE	GTEC113469	5602

20995 7590 02/14/2006

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EXAMINER	
HOWARD, ZACHARY C	

ART UNIT	PAPER NUMBER
1646	

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/793,653	DE SAUVAGE ET AL.	
	Examiner	Art Unit	
	Zachary C. Howard	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24 and 29-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24 and 29-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 February 1997* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10/14/05; 11/25/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Application, Amendments and/or Claims

Claims 14, 16-26 and 28-30 were previously pending. The amendment of 11/25/05 has been entered in full. Claims 14, 15-23 and 25-28 are cancelled. Claims 24, 29 and 30 are amended. New claims 31-36 are added.

Therefore, claims 24 and 29-36 are under consideration in the instant application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

It is noted that Applicants have previously requested a corrected filing receipt. Such will be mailed after this communication.

Withdrawn Objections and/or Rejections

The following page numbers refer to the previous Office Action (6/6/05).

The objection to claim 26 at pg 3 is *withdrawn* in view of Applicants' cancellation of this claim.

All rejections of claims 14, 15-23 and 25-28 are *withdrawn* in view of Applicants' cancellation of these claims.

The rejection of claim 24 under 35 U.S.C § 112, second paragraph, at pg 8 for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention is *withdrawn* in view of Applicants' amendment to claim 24.

The rejection of claims 24, 29 and 30 under 35 U.S.C. § 102(e) at pg 8-10 is *withdrawn* in view of Applicants' amendments to the claims.

The rejection of claims 24, 29 and 30 under 35 U.S.C. § 103(a) at pg 12-15 as being unpatentable over any one of Zhang et al, Basinski et al ('744 or '886), Dimarchi et al ('954 or '336), in view of Shin et al, or Ashkenazi et al, is *withdrawn* in view of Applicants' amendments to the claims.

Please see new claim rejections, below.

Inventorship

The petition under 37 CFR § 1.48(b) filed 11/25/1998 to delete the name of Nancy Levin, an originally named inventor in the instant application, has been reviewed and is granted.

Claim Rejections - 35 USC § 112, 1st paragraph, enablement

Claims 24 and 29-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This was previously set forth as a scope of enablement rejection (6/6/06; pgs 3-7); however, Applicants have narrowed the claims such that the claimed methods are now limited to a method of treating bulimia with Ob-Ig chimeras. However, as set forth in the Office Action of 6/6/06 (pgs 3-7), the specification does not provide enablement for treatment of bulimia.

Applicants' arguments (11/25/05; pgs 6-9) as they pertain to the rejection have been fully considered and while are persuasive with regard to use of chimeric Ig-Ob to induce weight loss, are not found persuasive with regard to the treatment of bulimia.

In the response dated 11/25/05, Applicants submit that the claims are adequately enabled and that a prima facie case of lack of enablement has not been made, in view of the fact that even ordinary leptin can induce a visible result in subjects with normal levels of leptin. Applicants argue that it is not true that the OB protein works only on ob/ob mutants. Applicants discuss the art (Gale et al, 2004 and Bell-Anderson et al, 2004) cited by the Examiner in the 6/6/05 Office Action. Applicants submit that neither reference asserts that leptin cannot have some impact on weight loss or obesity; but rather said references suggest that not everyone will have their weight permanently reduced when leptin is administered at certain levels and in certain manners. Applicants submit that they are not claiming a "magic-bullet" type treatment, where a single dose results in permanent and large decreases in weight for all people; rather that the claimed methods result in some weight loss, at some point, for some amount of time.

Applicants submit that their data and other studies have clearly demonstrated that leptin works on normal (non-ob/ob) animals (Rosenbaum et al, 2002; Campfield et al, 1995; Campfield et al, 1998; and Heymsfield et al, 1999). Applicants submit that a therapeutically effective amount (which can be larger for non ob-ob animals) will cause weight loss. Applicants further submit that "leptin-resistant" does not mean "leptin nonresponsive"; rather, that "leptin-resistant" implies that larger doses of leptin will be required to achieve the desired results. Applicants argue that the data from mice, monkeys and humans is sufficient to demonstrate the claimed method works, and therefore, it is not required that they provide evidence from human clinical trials. With respect to the treatment of bulimia, Applicants argue that the level of leptin in bulimic patients is not, *per se*, relevant as to whether or not the leptin can be used to "impact or alter a patient's characteristics". Applicants argue that in lean mice, with normal leptin levels, administration of leptin will still produce results. Applicants further argue that many references do establish a relationship between bulimia and leptin, including Jimerson et al, 2000; Taylor et al 1999; and Brewerton et al, 2000. Applicants submit that any previous showing that leptin levels remained constant in patients suffering from the disorder merely emphasizes the novelty and nonobviousness of the claims.

Applicants' arguments have been fully considered, and are found persuasive with regard to use of chimeric Ig-Ob in weight loss, but not with regard to the treatment of bulimia. The Examiner has fully considered the references submitted by Applicants, including Rosenbaum et al, 2002; Campfield et al, 1995; Campfield et al, 1998; and Heymsfield et al, 1999. The Examiner notes that Bell-Anderson review discusses the Heymsfield study on page 15, 1st column, first full paragraph (reference 58). Bell-Anderson teaches patients receiving the highest doses in the Heymsfield study as averaging 7.1kg weight loss over 20 weeks and reporting lower energy intake (pg 15). The Examiner notes that the Gale review discusses the Rosenbaum study on page 296, 1st column, first paragraph (reference 11), and teaches in that this study showed "exogenous leptin administration to replace leptin levels to preweight-loss levels prevented the regaining of weight and promoted loss of fat mass while pre-serving fat-free mass ... in a small group of subjects participating in a weight loss program, but

these findings have to be replicated by larger studies." Gale also teaches (as cited previously) "the administration of exogenous leptin fails to reduce adiposity significantly in most cases of human obesity that are characterized by increased adipocyte leptin content and high circulating leptin levels, reflecting a state of leptin resistance." The Examiner concedes that this does not contradict Applicants' position, especially in view of the support provided by the Heymsfield reference, that high doses of leptin can be used to induce some weight loss (however small) in most patients. In the Heymsfield study, it appears that while there was significant variation in the amount of weight lost and the amount of energy intake reduction, some measurable weight loss and reduction in energy intake occurred in most individuals when administered high doses of leptin.

The Examiner also agrees with Applicants' contention the level of leptin in bulimic patients is not, *per se*, relevant as to whether or not the leptin can be used to "impact or alter a patient's characteristics". However, a reduction in weight or food intake does not indicate treatment of bulimia has occurred. The ICD-10 and DSM-IV Diagnostic Criteria for Bulimia Nervosa are listed in Table 2 of Patrick, 2000 (Alternative Medicine Review, 7(3), pg: 184-202). Significantly, these criteria do not include obesity; consequently, bulimia can be diagnosed in underweight, normal weight, or overweight individuals who have the listed symptoms that meet the criteria. Therefore, loss of weight does not indicate treatment of bulimia, unless said loss of weight is correlated with treatment of the symptoms of bulimia. The instant specification does not provide any evidence that treatment with chimeric Ob protein correlates with treatment of the symptoms of bulimia.

Applicants have cited references indicating a connection between bulimia and leptin (the references of Jimerson et al, 2000, Taylor et al, 1999; and Brewerton et al, 1999). However, the Examiner has previously cited the reference Calandra et al, 2003 as showing that "serum leptin levels in bulimic patients were similar to those of healthy controls...although bulimic patients have very bad nutritional behavior, their leptin levels do not appear altered (see Abstract of Calandra et al, 2003. Eat Weight Disorder. 8(2): 130-137.) However, even if leptin levels are decreased in bulimic patients, it is not clear whether or not this is a cause or a symptom of the disease. It is unpredictable whether administration of leptin would treat the symptoms of bulimia in any patients whether or

not they have decreased leptin levels. One of the symptoms of bulimia is bingeing. With regard to bingeing, Corwin et al teach "the cause(s) of human bingeing is/are not known" (see pg 123 of Corwin et al, 2004. Physiology and Behavior. 82:123-130). Corwin further teaches that "Bingeing can occur in the absence of hunger and involves some level of emotional distress, such as a sense of loss of control, disgust, guilt, depression, or embarrassment." Therefore, even if bulimic patients administered high doses of leptin experience a reduction in food intake, or energy use, it is unpredictable whether or not this would impact the bingeing behavior, or any other symptom of bulimia.

Applicants' examples (both in the specification and in cited references) of weight loss in animals or humans administered leptin do not address whether the symptoms of bulimia would be treated by administration of leptin. Neither the animals nor the humans administered the leptin in the examples have the symptoms of bulimia. With respect to one of the symptoms of bulimia (binge eating), Corwin further teaches isomorphic animal models that "are designed to resemble human symptomology" (see pg 123). These models are more relevant to the treatment of bulimia than the non-bulimic animal and non-bulimic human models referred to by Applicants.

It is acknowledged that the level of skill of those in the art is high, but it is not disclosed and not predictable from the limited teachings of the prior art and specification whether or not the OB-Ig of the present invention could be used to treat bulimia. There are no methods or working examples disclosing treatment of bulimia with the claimed OB-Ig. Thus the specification fails to teach the skilled artisan how to use the method for treatment or elicitation without resorting to undue experimentation. The specification has not provided the person of ordinary skill in the art the guidance necessary to be able to use the method or composition for the above stated purpose. The quantity of experimentation needed to make and use the invention as claimed would be undue because a person of skill in the art would need to engage in further experimentation to test whether administration of an OB-Ig fusion protein would or would not treat bulimia

Claims 32-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 32-34 are indefinite due to the use of the terminology "further comprises". For example, in claim 32 it is unclear whether the limitation presented by this claim narrows the scope of the chimeric protein of claim 24, or whether it adds an extra structure to the chimeric protein. To restate, it is unclear whether the chimeric protein of claim 32 is meant to be just the protein of claim 32, or whether it is supposed to be the protein of claim 32, plus the additional limitation of claim 32.

Claim 33 recites the limitation "said OB polypeptide-IgG heavy chain fusion" in line 33. There is insufficient antecedent basis for this limitation in the claim. Claim 33 depends from claim 24. Claim 24 recites a chimeric polypeptide comprising an OB protein and an immunoglobulin heavy chain constant domain. However, claim 24 does not limit the immunoglobulin heavy chain to a heavy chain from IgG (as the instant specification teaches, there are other immunoglobulins, for example IgA, IgD, IgE and IgM; see pg 6, line 38 to pg 7, line 1). Therefore, the use of IgG in claim 33 lacks antecedent basis.

Claim Rejections - 35 USC § 103

Claims 24 and 29-31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pellymounter et al, U.S. Patent Application Publication No. 2003/0203837, filed 5/30/2003 and meriting priority to 11/22/1995 (cited in the previous Office Action) in view of Shisslak et al, 1990 (Journal of Abnormal Psychology. 99(4): 380-384).

Claim 24 encompasses a method comprising administering to a patient having bulimia a therapeutically effective amount of a chimeric protein comprising a native OB protein (with or without an initiating N-terminal methionine) fused to an immunoglobulin heavy chain constant domain sequence. The recitation of "treating bulimia" in the preamble of the claim is interpreted as an intended use and bears no accorded patentable weight, except in so far as it limits the "patient" of the method steps to those

with "bulimia". In addition, the recitation of "administering to a patient having bulimia" in the method steps of the claim has been interpreted as encompassing an obese patient with bulimia.

Furthermore, the specification does not define or limit a "therapeutically effective amount" and therefore the term encompasses any amount that is effective for any therapy, including weight loss.

Pellymounter teaches administration of a OB protein derivative to act as a weight reducing agent (see pg 1, paragraph 11 and pg 6, paragraph 67). Pellymounter teaches (see pg 3, paragraph 31) that derivatives of the OB protein include fusion proteins that "may be prepared by attaching polyamino acids to the OB protein (or analog) moiety. For example, the polyamino acid may be a carrier protein which serves to increase the circulation half-life of the protein. Such polyamino acid may be selected from the group consisting of...an antibody or portion thereof (such as an antibody constant region, sometimes called "Fc")...As indicated below, the location of attachment of the polyamino acid may be at the N-terminus of the OB protein moiety, or other place, and also may be connected by a chemical "linker" moiety to the OB protein." The term Fc refers to a part of the antibody consisting of only heavy chain constant domain sequences. Pellymounter teaches (paragraph 16, lines 3-4) that the OB protein used may be the human OB protein according to Zhang et al (Reference 37 of the IDS filed 12-3-1998). The sequence taught by Zhang in Figure 6b (page 430) is the "sequence of human OB protein" and includes an initiating N-terminal methionine and a native signal sequence. Pellymounter, in claim 1, teaches "A fusion protein optionally having an N-terminal methionine comprising an antibody constant region or portion thereof attached to the N-terminus of an OB protein." Pellymounter (paragraph 66, lines 1-3) further teaches "One skilled in the art will be able to ascertain effective dosages by administration and observing the desired therapeutic effect."

Claims 29 and 30 add the limitations recited in claims 29 and 30 add the limitation that administration results in "a decrease in food intake" (claim 29) or "an increase in energy use" (claim 30). Pellymounter teaches that administration of Ob protein reduces food intake (see pg 1, paragraph 4). Loss of body weight inherently

indicates that an increase in energy use occurs, therefore the weight loss that Pellymounter teaches meets the definition of an increase in energy use.

Claim 31 limits the "therapeutically effective" amount to between 1 microgram/kg and 100 mg/kg per day. Pellymounter teaches, "preferably, the formulation of the molecule will be such that between about 0.10 microgram/kg/day and 10 mg/kg/day will yield the desired therapeutic effect" (pg 6, paragraph 66).

Claim 35 limits the chimeric polypeptide to those that include amino acids 1-167 of full length OB protein (SEQ ID NO: 2), which is the human OB protein. As described above, Pellymounter teaches that the OB protein used may be the human OB protein according to Zhang et al (Reference 37 of the IDS filed 12-3-1998). The sequence of the human protein taught by Zhang is 167 amino acids and is identical to amino acids 1-167 of instant SEQ ID NO: 2.

Pellymounter does not teach administration of the chimeric Ob-Fc protein to a patient having bulimia.

Shisslak teaches that a bulimic subject can be overweight, underweight, or normal-weight: "Although the majority of bulimics are of normal weight, there are approximately 15% who are underweight and about the same proportion who are overweight..." (see pg 380).

It would be obvious to the person of ordinary skill in the art at the time the invention was made to administer the chimeric protein taught by Pellymounter to an overweight bulimic subject as taught by Shisslak. The person of ordinary skill in the art would be motivated to do so in order to reduce the obesity in the bulimic person. The person of ordinary skill in the art would have expected success because Pellymounter teaches that administration of the Ob protein results in weight loss in obese individuals, and in the absence of evidence to the contrary, would expect it to work as well for a obese bulimic individual as for any other obese individual.

Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pellymounter et al, U.S. Patent Application Publication No. 2003/0203837, filed 5/30/2003 and meriting priority to 11/22/1995 (cited in the previous Office Action) in

view of Shisslak et al, 1990 (Journal of Abnormal Psychology. 99(4): 380-384) as applied to claim 24 above, and in further view of Capon et al, U.S. Patent No. 5,455,165, published 10/3/1995.

As described above, Pellymounter teaches a chimeric polypeptide comprising the amino acid sequence of a native OB protein, with the N-terminal methionine and with the native signal sequence, fused to Fc region of an antibody, which is an immunoglobulin heavy chain constant domain sequence that comprises the hinge, CH2, and CH3 regions.

Shisslak teaches that a bulimic subject can be overweight, underweight, or normal-weight: "Although the majority of bulimics are of normal weight, there are approximately 15% who are underweight and about the same proportion who are overweight..." (see pg 380).

Neither Pellymounter nor Shisslak teach that two chimeric OB polypeptide IgG heavy chain fusion as are linked to each other by at least one disulfide bond (as in claim 32); or the chimeric polypeptide of claim 16 wherein at least one of the heavy chain fusions is associated with an immunoglobulin light chain (as in claim 33); or the immunoglobulin constant domain sequence comprises the hinge, CH2, and CH3 regions of IgG-1 (as in claim 34).

Capon teaches general techniques for "compositions and methods for improving the circulating half-life of ligand binding molecules...hybrid immunoglobulin molecules, to methods for making and using these immunoglobulins, and to nucleic acids encoding them." Capon further teaches, "typically, such fusions retain at least functionally active hinge, CH2, and CH3 domains of the constant region of an immunoglobulin heavy chain" (col 9, lines 56-58). Capon further teaches, "immunoglobulin combining sites and fusion partners are obtained from ... preferably IgG-1" (col 13, 53-55). Capon further teaches homodimers consisting of protein-constant domain fusions that are "disulfide bonded in the same fashion as native immunoglobulins" (col 10, lines 35-65 and col 11, lines 2-3). Capon further teaches (same section) that the homodimers can be associated with immunoglobulin light chains.

It would have been obvious to the person of ordinary skill in the art at the time the invention was made to modify the OB-Fc fusion taught by Pellymounter to use any of the above teachings of Capon, and to administer this modified OB-Fc fusion to an overweight bulimic as taught by Shisslak. The person of ordinary skill in the art would be motivated to do so because Pellymounter teaches Fc fusions and Capon teaches generic modifications of a hybrid immunoglobulin that can be used to prolong the in vivo plasma half-life of a protein to which the immunoglobulin is fused, and each of the above modifications is taught by Capon as examples of ones that will prolong the half-life of the protein. One of skill in the art would expect success because Pellymounter teaches OB-Fc fusions and Capon teaches all of the techniques necessary to make the modified OB-Fc fusions described above. The person of ordinary skill in the art would be motivated to administer this OB-Fc fusion to an obese bulimic in order to reduce the obesity in the bulimic person. The person of ordinary skill in the art would have expected success because Pellymounter teaches that administration of the Ob protein results in weight loss in obese individuals and Capon teaches improvements in the Fc fusions, and in the absence of evidence to the contrary, would expect modified Fc fusions to work as well for a obese bulimic individual as for any other obese individual.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pellymounter et al, U.S. Patent Application Publication No. 2003/0203837, filed 5/30/2003 and meriting priority to 11/22/1995 (cited in the previous Office Action) in view of Shisslak et al, 1990 (Journal of Abnormal Psychology. 99(4): 380-384) as applied to claim 24 above as applied to claim 24, and in further view of Bennett et al, 1991 (Journal of Biological Chemistry. 266(34): 23060-23067).

As described above, Pellymounter teaches a method of administering a chimeric polypeptide comprising the amino acid sequence of a native human OB protein (residues 1-167 of SEQ ID NO: 2), and Shisslak teaches that a bulimic subject can be overweight, underweight, or normal-weight: "Although the majority of bulimics are of normal weight, there are approximately 15% who are underweight and about the same proportion who are overweight..." (see pg 380).

Neither Pellymounter nor Shisslak teaches that the chimeric polypeptide has the sequence of SEQ ID NO: 2.

SEQ ID NO: 2 is amino acid sequence consisting of three parts: (1) residues 1-167 of native human OB protein; (2) a linker of three amino acid residues (Gly-Val-Thr); and (3) 227 amino acid residues from IgG-1 (see specification pg 18, line 30 through pg 19, line 11). The source of the residues from IgG-1 is the plasmid pBSSK (pg 18, line 35).

Bennett teaches plasmid pBSSK, which contains the Fc coding sequence following a BstEII restriction site (pg 23061, column 2, 1st paragraph). Bennett further teaches that this plasmid can be "used as starting material for coding sequence fusions as the BstEII site, which results in the introduction of Val and Thr residues between the natriuretic peptide receptor extracellular domain and the immunoglobulin heavy chain hinge region. Human natriuretic peptide receptor BstEII fusion fragments were made with 3'-PCR primers incorporating base substitutions to create a BstEII site immediately adjacent to the last amino acid of the receptor's extracellular domain." Bennett further teaches that the created BstEII site had the sequence GGTGACC. Introduction of a BstEII site immediately adjacent to the codon encoding the last amino acid residue of a protein would inherently create a GGT codon encoding a 'Gly' residue in the encoded protein. Therefore, the fusion protein has a Gly-Val-Thr linker between the protein and the Fc region.

It would be obvious to the person of ordinary skill in the art at the time the invention was made to administer the chimeric protein taught by Pellymounter to an overweight bulimic subject as taught by Shisslak. The person of ordinary skill in the art would be motivated to do so in order to reduce the obesity in the bulimic person. The person of ordinary skill in the art would have expected success because Pellymounter teaches that administration of the Ob protein results in weight loss in obese individuals, and in the absence of evidence to the contrary, would expect it to work as well for a obese bulimic individual as for any other obese individual. It would have further been obvious to the person of ordinary skill in the art at the time the invention was made to make the OB-Fc fusion taught by Pellymounter by using the method of making a Fc

fusion protein as taught by Bennett. This method would create an OB-Fc fusion protein comprising the sequence of instant SEQ ID NO: 2. The person of ordinary skill in the art would be motivated to do so because Pellymounter teaches the benefits of Ob-Fc fusion proteins. One of skill in the art would expect success because Bennett provides the plasmid and method for creating a protein-Fc fusion, and demonstrates successful construction of such a protein.

Conclusion

No claims are allowed.

Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary C. Howard whose telephone number is 571-272-2877. The examiner can normally be reached on M-F 9:30 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet L. Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

zch

JANET L. ANDRES
SUPERVISORY PATENT EXAMINER